

CHARGE NUMBER: 1101
PROGRAM TITLE: ENTOMOLOGICAL RESEARCH
PERIOD COVERED: July 1-31, 1980
PROJECT LEADER: M. A. Manzelli
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I. INSECT GROWTH REGULATOR

A. 1976 Bright Strip and Stem KABAT® Application

The few remaining hogsheads of this treatment (retained in the miniwarehouse study) have been sampled for final bio and chemical assays.¹

B. Commercial Application of KABAT®

A seminar on KABAT® usage was presented to the technical staff of the Universal Leaf Company, members of which will be involved in the application of the IGR to PM tobacco.

II. PHYSIOLOGY OF THE CIGARETTE BEETLE

A. Effect of Phosphoric Acid on Growth Cycle

Eggs placed in tobacco treated with 0.1, 0.25, 0.5, and 1.0% H_3PO_4 have hatched and given rise to adults.²

B. Nonacclimated Exposure to -6.7°C (20°F)

The third and final replicate has been completed in this study. A summary of the three series of data shows the following mortality times (in days) for the four beetle stages at -6.7°C exposure:

<u>Adults</u>	<u>Pupae</u>	<u>Larvae</u>	<u>Eggs</u>
3	4	4	7

The next series will involve the same temperature exposure, but will be preceded by exposing the four beetle forms to 12.5°C (55°F) for seven days (acclimitization).³

III. ASSISTANCE TO AREAS OUTSIDE R & D

A. Costa Rica KABAT® Study

Samples of KABAT® treated tobacco from Costa Rica are being bioassayed to check analytical findings.⁴

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B. Stockton Street Plant--Infestation Inspection

Cigarette filler in saratogas was found to harbor adult beetles. Appropriate control steps were recommended.⁵

IV. REFERENCES

1. Lehman, R. M. Notebook No. 7235, p. 99.
2. Lehman, R. M. Notebook No. 7235, p. 100.
3. Long, J. S. Notebook No. 7283, p. 113.
4. Long, J. S. Notebook No. 7283, p. 114.
5. Lehman, R. M. Notebook No. 7235, pp. 93-95.

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